

REMARKS

In the above-identified office action the Examiner has objected to the drawings because of certain matters enumerated therein. Applicant has attended to each of the matters delineated by the Examiner and, accordingly, Applicant believes that the drawings are now acceptable. Corrected drawing sheets are hereby enclosed.

The Examiner has also objected to the abstract. Applicant has redirected the abstract and submits a corrected abstract for the Examiner's review.

The Examiner has also objected to the specification. Applicant has amended the specification, inserting the required headings and further addressed each of the informalities noted by the Examiner.

In addition, the claims have been objected to because of certain informalities and rejected under 35 U.S.C. 112 as indefinite. Applicant has addressed each of the Examiner's noted informalities and indefinite language and, as such, Applicant believes the claims to now be acceptable under 35 U.S.C. 112.

Claims 1-4, 8-11, and 17-19 have been rejected as unpatentable over Vitenberg in view of Uppunda, Crawford and Abbate. Further, claims 5-7, 15, 16 and 21 have been rejected under 35 U.S.C. 103(a) as unpatentable over Vitenberg in view of Uppunda, Crawford and Abbate and further in view of Abbey. Applicant believes that of the above references, neither Crawford nor Abbate are references which may properly be used in the rejection of the subject matter herein as set forth in more detail below.

Vitenberg describes a system comprising a plurality of subscribers having a home modem for connecting a computer, television or video phone (Fig. 1) to a network. The system further comprises a central office having a plurality of office modems. The number of office modems is less than the number of subscribers (page 13, 6. paragraph), and therefore the number of home modems. For connecting one of the home modems to one of the office modems the central office has a concentrator. The concentrator performs an off-hook detection to determine if one of the subscribers desires data service. For this determination the off-hook detector may monitor direct line current, voltage, electrical tones, data link frames, or any other protocol or data sequencing (page 13, 7. paragraph). Upon detecting a need for data service, the concentrator selects the active subscriber (which desires the data service) and an available office modem, and further couples them for a connection between the home modem and the selected office modem over an ordinary telephone line (page 26, 2. paragraph).

Even if Vitenberg discloses a wake-up command generating means as stated by the Examiner (chapter 22 of the Office Action), this wake-up command generating means is different than the one defined according to the present invention. According to the teachings of Vitenberg the active home modem is detected, and then an available office modem is determined. This means the central office controls which

office modems are not connected to other ones of active home modems. One of the available office modems is chosen to be connected to the active home modem which now desires a connection.

Contrary to that, the wake-up generating means according to the present invention is defined such that it generates a wake-up command for the modem in the central office when the signal coming from the user modem contains a wake-up identification which is identical to a stored wake-up bit pattern for identifying the corresponding user modem.

Regarding the storing and comparing of the wake-up bit pattern the Examiner refers to Uppunda, which discloses a network having various components which may communicate according to a DSL protocol. One of the network components is a PC of a subscriber. The PC comprises wake-up patterns which are compared to packets received by the PC while in a sleep state. The wake-up patterns are chosen to match data that, when received by the PC, require action on the part of the PC. When such a match is found, a signal is generated to cause the PC to exit the sleep state to take the required action.

According to the teachings of Uppunda the stored wake-up pattern corresponds to a certain action which has to be taken by the PC. Also, the PC is a component which is part of the subscriber side of the network. Therefore, even if the person skilled in the art would combine the teachings of Vitenberg and Uppunda he/she would store the wake-up pattern of Uppunda within the computer of the subscriber of Vitenberg. Uppunda does not teach the storing of a wake-up pattern within a modem of a central office of the network. Further, Uppunda does not teach the storing of a wake-up pattern which corresponds to a certain user (subscriber) modem so that it is possible to identify this user modem. The wake-up pattern according to Uppunda correspond to certain actions, only. Therefore, even if a person skilled in the art would transfer this teaching of Uppunda to the system of Vitenberg, a component (computer of the subscriber) would exit the sleep state when the component is used to carry out a certain action independent of the user who asks for this action.

Regarding the claimed features of the demodulating means of the (office) modem the Examiner refers to Crawford who describes a demodulator for amplitude-shift keyed (ASK) signals. Such a demodulator is used in optical communication systems, as part of a receiver that receives optical signals modulated according to ASK data signals. These signals carry digital data in the form either of an absence of light pulses or a burst of light pulses, occurring at a predetermined frequency (col. 1, lines 7-17). This application of the demodulator is different to the one of the claimed invention. According to the claimed invention xDSL modems are usually used for carrying out a transmission of analog data over a traditional telephone line. The telephone line is not an optical communication line. Therefore, the person skilled in the art would not use the teachings of Crawford since the system disclosed by Crawford belongs to a completely

Serial No. 09/869,215

different communication system and thus cannot be used in a determination of the patentability of the subject claims.

Regarding the pulse length modulated wake-up signal according to the present invention the Examiner refers to Abbate who discloses an interface for providing a serial communication between a computer and an audio/video equipment such as camcorders, video tape recorders, VTR, tape decks, etc. Typically computers have a serial RS-422 standard interface, whereas the audio/video equipments use a different protocol such as Control-S wired or Control-S infrared, for example, to be remotely controlled by another device such as the computer. Abbate discloses that for the Control-S protocol pulse width modulated signals are used for encoding digital data (col. 8, lines 20-22).

Abbate also describes a technical field which is completely different of the one of the present invention. Therefore, the person skilled in the art would not use the teachings of Crawford to find a solution for a problem involving xDSL modems which consume a minimum amount of power. The person skilled in the art would not expect to get hints for the solution of an xDSL modem problem from Crawford who describes an interface between a computer and audio/video equipment.

Thus, a person skilled in the art would not combine the teachings of the four references cited by the Examiner. Even if the person skilled in the art would combine these teachings he/she would not arrive at the present invention since none of the references discloses a wake-up bit pattern which identifies a corresponding xDSL user modem within a xDSL modem of a central office.

Applicant hereby requests reconsideration and reexamination.

With the above amendments and remarks, Applicant considers this application to be allowable and earnestly solicits an early notice of same. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, the Examiner is respectfully requested to call the undersigned at the below-listed number.

Respectfully submitted,

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